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BOARD OF INSPECTION AND SURVEY INSTRUCTION 4730.25

From: President, Board of Inspection and Survey

Subj: STANDARDS FOR SURFACE SHIP TOMAHAWK STRIKE DEMONSTRATION

1. Purpose. To establish policy and standards for demonstrating the condition of the Tomahawk weapons system for applicable surface ships during INSURV Final Contract Trials (FCTs) and Material Inspections (MIs). These demonstrations are designed to test equipment parameters and are not to be construed as tactical or training demonstrations.

2. Cancellation. None.

3. Discussions. The Tomahawk Strike demonstration is an evaluation of strike warfare equipment in a clear environment. Strike warfare equipment to be demonstrated includes:

a. Tomahawk Weapons Control System (TWCS) or Advanced Tomahawk Weapon Control System (ATWCS).

b. Vertical Launch System (VLS).

c. Communications equipment (OTCIXS, TADIXS, SCI ADNS, STU III, EHF Satcom).

d. Database management equipment (GFCP/GCCS-M) and weapon system interfaces (VLS launcher control units (LCU) and navigation gyros).

e. Salvo warning alarms and toxic gas vent dampers.

f. Support equipment (VLS cameras, printers, TER intrusion alarms).

4. Policy. A Strike demonstration will be conducted in all Tomahawk-equipped ships.

5. Requirements. The ship is required to receive/download a Mission Data Update (MDU) via each appropriate communication path during the demonstration. (Note: The ship is responsible for arranging transmission of MDUs and track file databases prior to start of the inspection.) The following equipment functions will be demonstrated:

a. Demonstrate receipt of MDUs via EHF NECC or EHF point-to-point, SCI ADNS (if applicable), STU III.

b. Transmit and receive track file database data via OTCIXS, Link 11, TADIXS or Net Precedence.

c. Demonstrate interfaces to all installed gyros.

d. Demonstrate VLS LCU interface.

e. Perform a simulated Tomahawk launch from each VLS launcher, including use of hold-fire and SM-2/VLA fire-through procedures.

f. Demonstrate MDU processing via “repeat” procedures (if SCI ADNS equipped).

g. Demonstrate operation of the salvo warning alarm system.

h. Demonstrate operation of the toxic gas vent dampers.

i. Demonstrate the ability to update current GPS almanac data from an external source.

6. Demonstration Procedures.

a. Communications.

(1) Properly align all appropriate communications equipment and receive/process an MDU via all communications paths.

(2) Ensure OTCIXS and TADIXS are energized and aligned for normal operation during the demonstration. Be prepared to demonstrate receipt of appropriate data via review of the input report logs.

(3) Properly align appropriate equipment and receive/process GPS almanac data from an external source.

b. Tomahawk Weapons System Operations (TWCS or ATWCS).

(1) Verify receipt and availability of MDUs.

(2) Verify receipt of the track file database from the appropriate fleet Force Over-the-Horizon Track Coordinator.

(3) Perform the TWCS/ATWCS System Operability Test (SOT) using the appropriate PMS.

(4) Verify that acceptable data inputs are available from all installed gyros/WSNs.

(5) Perform an engagement scenario consisting of 1 simulated missile launch from each installed launcher using MDU and track file database information received during the communications demonstration.

(6) Demonstrate operation of the Salvo Warning Alarm, Toxic Vent Dampers, and the VLS camera during the simulated missile launches.

7. Strike Demonstration Evaluation. The Strike Demonstration will be evaluated using one or more of the following criteria:

a. Satisfactory. An MDU was successfully received via all appropriate communications paths. A track file database was successfully received. GPS almanac data was successfully received. Gyro/WSN inputs and all interfaces were fully functional. An engagement scenario was successfully planned using MDU and track file database data received during the demonstration. A simulated launch was successfully conducted from each installed launcher. Salvo warning alarms, toxic gas vent dampers and the VLS camera were fully functional.

b. Degraded. The following conditions may result in a degraded demonstration. An MDU was not successfully received via all appropriate communications paths. A track file database was not successfully received. GPS almanac data was not successfully received. Gyro/WSN inputs and all interfaces were not fully functional. A simulated launch was not successfully conducted from each installed launcher. Salvo warning alarms, toxic gas vent dampers and the VLS camera were not fully functional.

c. Unsatisfactory. The following conditions will result in an unsatisfactory demonstration. An MDU was not successfully received via any appropriate communications path. A track file database was not successfully received. GPS almanac data was not successfully received. Gyro/WSN inputs and all interfaces were not functional. An engagement scenario was not successfully planned using MDU and track file database data received during the demonstration. A simulated launch was not successfully conducted from any installed launcher. Salvo warning alarms, toxic gas vent dampers and the VLS camera were not functional. Additionally, any condition that compromises personnel or equipment safety during the demonstration may result in an unsatisfactory grade for the demonstration.

8. Responsibility. As with all ship's operations, the Commanding Officer retains responsibility for the safe conduct of this demonstration and for ensuring all applicable safety precautions are enforced. Nothing is more important than the safety of all personnel and equipment.

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C. A. KEMP

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